

Contractor and Supplier Focus Group Findings
Conducted March 4 and 5, 2008
Berkeley's Solar and Energy Efficiency Initiative
March 7, 2008

This document summarizes the findings from the four focus groups conducted with solar and energy efficiency contractors and solar suppliers on March 4 and 5, 2008, in Berkeley, for the City of Berkeley's planned solar and energy efficiency initiative. Marjorie McRae of Research Into Action moderated the focus groups, under contract to Build It Green, as directed by Bruce Mast. The specific groups included PV contractors, Home Performance contractors, solar thermal (hot water and space heating) contractors, and solar equipment suppliers. Some individuals qualified for more than one group; group assignments were made to generate groups of roughly comparable sizes.

The focus group participants were asked to comment on what were described as three key elements in the City's program plan, plus three more tentative elements under consideration. The three key elements were:

- *Financing Incentive for Renewable and Solar Technology (FIRST)*—Central to the program, as initially envisioned, is a financing mechanism that would eliminate or greatly reduce first costs to owners of residential and commercial property for undertaking energy efficiency upgrades and solar installations, and would provide a long term for the loan (e.g., 20 years) so that an owner's cash flow would be positive for much of the period (e.g., annual energy savings would exceed annual loan repayment costs). The loans would be offered by the City at competitive interest rates and owners would pay the city back via a line item on their property tax assessments. The loan and its repayment via the property tax bill would stay with the property for the duration of the loan, even if the property is sold during the period.
- *Both energy efficiency remediation and solar installations are both required.* Structures would be assessed for compliance with Berkeley's Residential Energy Conservation Ordinance (RECO) and Commercial Energy Conservation Ordinance (CECO) for new construction. Additional efficiency requirements are being considered.
- *Quality control requirements*, including: contractor pre-screening (i.e., establishing a list of program-eligible contractors); standardized assumptions for energy price escalation, discount rate, and possibly other variables used in financial analyses; standards for energy efficiency remediation work; standardized equipment performance specifications for solar equipment; third party performance testing of energy efficiency remediation work; and random inspections of solar installations.

Tentative program elements under consideration included:

- *Program acting as an "owners representative."* This role would encompass marketing the program sufficiently to meet program goals; enrolling customers in the program; conducting site visits to assess energy efficiency upgrade and solar needs (including screening out sites that are cannot accommodate efficiency upgrades or solar installations); conducting the financial analyses;

preparing for the customer draft statements of work for efficiency and solar; advising customer to obtain three bids for both efficiency and solar work; following-up with the customer to select contractors; specifying the exact statement of work (including system sizing) and assisting the customer in executing contracts with contractors; and ensuring the work was done according to specifications (i.e., working with contractors until final work complies with specifications).

- *Bulk purchasing of PV and solar thermal equipment.* The program would purchase equipment in bulk to get volume discounts.
- *A possible need for bridge financing.* It is possible the program would not be able to issue checks to owners until the work is completed. In that case, the owner or contractor would need to carry the cost of the job until the City can issue payment.

The focus group participants were virtually unanimous in their responses to the program elements—virtually all members of all four groups expressed similar views about each of the planned and tentative program elements. Variations in responses were limited to the reasons they gave for their opinion, and to the questions and concerns they had; the opinions themselves were virtually unanimous.

Opinions Expressed about Key Program Elements

- *FIRST Financing*—Participants were very enthusiastic about the proposed financing method, although some participants raised questions about its sustainability, as discussed below. They hope the City designs and delivers an effective program and anticipates that, if so, many other municipalities will emulate its efforts. Comments were made along the lines of “The City has always been an innovator and it can have tremendous positive influence with this if it’s successful.”
- *Requiring both energy efficiency and solar installations*—Participants strongly urged the City not to require both energy efficiency and solar installations. They offered the following reasons:
 - *The market would be unnecessarily limited*—Many buildings that will need energy efficiency remediation that will not be good candidates for solar, and some candidates for solar will have already conducted energy efficiency upgrades. Owners often have fairly fixed ideas as to wanting only energy efficiency or solar and such owners may not be willing to do both. Owners of modest means would be reluctant to invest so much in their properties, even with the promise of cost savings.
 - *Program participation would require too much of participants and would stretch too long*—Potential program participants would be discouraged from participating and active program participants would likely be overwhelmed. Even were the program to act as the owner’s representative, the owner would need to be involved in multiple decisions and contractors and would come to the building multiple times; there is a strong possibility that projects would drag out or be abandoned as owners lose enthusiasm for their projects.
- *Quality control requirements*
 - *Contractor pre-screening*—Participants felt contractor pre-screening was reasonable, providing the screening requirements were not onerous. They encouraged the City to adopt screening requirements already established by other successful programs.

- *Standardized assumptions for financial analyses*—All participants but one felt standardized assumptions were reasonable.
- *Standardized equipment performance specifications for solar equipment*—Participants thought specifications could be reasonable provided they set a minimum bar for quality and did not limit contractors' ability to specify what they believe to be the right equipment for the job. Build It Green had not identified for the focus group moderator the performance specifications under consideration and so the discussion of this topic was brief.
- *Third party performance testing of energy efficiency remediation work*—Participants understood the program's interest in assuring quality efficiency installations but raised concerns about this feature.
 - *Ideally, the "auditor in" is the "auditor out"*—Reasonable, experienced professionals disagree as to the best actions to take for any structure and their opinions may be equally valid. Focus group participants noted there can be confusion for the customer when a different rater tests the structure at the end of the process than at the beginning and raises questions that undermines the customer's confidence in the work. If third-party performance testing occurs, contractors would like to accompany the auditor for the visit.
 - *Each visit to the site costs the contractor and inconveniences the owner*—Participants would like the third-party rater to be at the site at the time the contractor is also making its final site visit.
 - *Verification may delay the completion of the project*—In the event that incentive payments are made after final verification visits, it is important to the contractor and customer that the verification visits occur at the time the contractor is completing the job.
- *Random inspections of solar installations*—Participants thought this was reasonable. The moderator described possible inspection rates of 100% of the first five installations and 10% to 15% thereafter. One participant noted that another program had started with a 15% inspection rate and found that rate was not sustainable (costly and a back log developed).

Opinions Expressed about Tentative Program Elements

- *Program acting as an "owners representative."* Participants unanimously voiced strong opposition to this role. Several focus group participants indicated they would not participate in the program were this its structure. In the words of one participant, expressed with evident sarcasm, "Why don't we just fax you our rate sheets and you complete our bids. Let us know if we got the job."
 - *Installers compete on factors other than price*—The proposed role for the program would limit competition to price. One or two lowest-cost providers would prevail.
 - *Installers warranty their work*—And they would not be willing to warranty a system or efficiency installation they did not design, for a site they did not visit while preparing the bid.
 - *The role would effectively raise the cost of submitting bids*—Participants indicated it requires one or two days to formulate a bid from a draft statement of work. The proposed approach

- would likely result in more contractors submitting bids for each project than the current typical, reducing the average “win rate” and effectively increasing their cost per winning bid.
- *Installers are experienced professionals*—How can the program be so confident that it can find sufficient numbers of staff with expertise that rivals that of the professionals? In the words of one participant, “Let me know where you are finding these people, because I want to hire them!”
 - *This large role for program staff would result in project backlogs*—as installers don’t think it’s a “buyers market” for experienced staff, they anticipate the program staff would be limited and a backlog would develop, especially considering the extremely time-intensive nature of the work the program is proposing to take on.
 - *This large role for program staff would transfer costs from the participants and installers to the program, resulting in large administrative costs.*
- *Bulk purchasing of PV and solar thermal equipment.* Participants unanimously voiced strong opposition to this action.
 - *Different jobs require different models and even different makes (manufacturers)*—A “one size fits all” approach results in a “one size fits one” outcome, with customers poorly served or not served at all.
 - *A strong possibility for obsolete or otherwise undesirable equipment*—Participants gave examples of programs that got stuck with large inventories of equipment that was no longer in demand.
 - *Suppliers and installers have existing relationships that would be disrupted*—Both the installer and supplier focus group participants mentioned this and both value preserving their relationships with the other party.
 - *Many installers already have access to high-volume discounts*—It is thus not clear the degree of financial advantage the City might obtain.
 - *Suppliers would be willing to consider providing volume discounts to eligible installers on the premise that over time the program would generate a high volume of equipment sales.* This issue was briefly discussed with the supplier group and participants indicated they would be willing to consider such an arrangement. None of the possible details of such an approach were discussed.
 - *A possible need for bridge financing.* Most participants thought a need for bridge financing that the customer, contractor, or supplier would have to cover would greatly reduce the program’s appeal. If the FIRST financing model requires bridge financing from start of project to its complete installation, the program would need to provide it and not rely on the private sector to arrange for it.
 - Some participants suggested only the larger firms would be able to offer to carry the cost of the job until project completion. Other participants suggested such a provision would limit the number of jobs a firm could conduct at one time. Some participants noted home equity loans are becoming harder to get during the current housing market crisis.

Opinions Expressed about Impromptu Topic Discussed

When it became apparent to Build It Green after the first two focus groups that the installers were opposed to requiring both energy efficiency and solar, Build It Green requested the moderator explore an additional topic with the final two groups, solar thermal installers and solar equipment suppliers. The question: What did focus group participants think about the program specifying a measure loading, that is an ordering of energy efficiency and solar actions to be undertaken up to the maximum investment the owner is willing to make.

- *Solar thermal installers believe solar hot water is the most (or among the top few) cost-effective measures when the metric is reducing the carbon footprint and, as a consequence, they were in favor of a measure loading if it would reflect that.*
- *Solar equipment suppliers were not enthusiastic about a measure loading but did not express strong negative opinions.*

Concerns Raised

- What would be the requirements for efficiency upgrades? An almost limited number of things can be done. Different professionals will prioritize the potential actions differently. Some actions necessitate structural repairs. Would minimum actions or performance requirements be set? Would maximums be set? Would exceptions be made?
- Act quickly; PV rebates are scheduled to decline with time.
- Solar installations have stopped; don't publicize that energy efficiency is being considered as part of the program.
- Why are the solar thermal goals so low? Solar thermal is among the most cost-effective actions to reduce carbon footprint.
- What is envisioned for the program budget? Several participants raised this concern. Several said they had done "back of the envelope calculations" or started to do them on the spot. The general line discussion was along the lines of: Assuming over ten years that 20% of single family houses participate (20% of ~20,000); assuming efficiency and solar are both required; assuming total project cost is perhaps \$30k (\$15k energy efficiency, \$15k PV); assuming the City has administrative costs of 20% (participants did not give a percentage estimate; one participant identified PG&E's costs at about \$0.50 per watt for PV); then you need to raise a heck of a lot of money! (\$144 million using these assumptions)
- If participation needs to be limited, how would it be rationed between energy efficiency and solar? How would it be limited and still address social equity?
- The FIRST financing was described as quickly generating positive cash flow for participants. Is this a reasonable assumption?
 - Does the assumption work under differing hypotheses about energy price escalation?
 - Customers often engage in "take back," especially for energy efficiency improvements in mild climates. They may run the heating system (and increase their comfort) because now they can afford to do so, while previously they could not. If customers don't have a positive cash flow, will that jeopardize their ability to pay back the loan?

Ideal Program Features

- Financing is a great idea
- Awareness marketing, consumer education (complex topic; hard to make decisions)
- Establish a “hurdle” that serves as a screen to identify serious potential participants (and screens out the “tire-kickers”
 - Possible hurdles: Put a small amount of money up-front (e.g., \$700); require attendance at a workshop of 2 to 4 hours duration
- Keep it simple!
- Don’t interfere with existing market relationships. The market is working. Interfering with market relationships is unlikely to be helpful in the short-run and certain to be harmful in the long-run.

Suggestions Offered

- Develop an in-depth understanding of the solar and efficiency program efforts around the state (by utilities and municipalities) and their outcomes. Avoid replicating unsuccessful elements (of which there have been many).
- Make quality control requirements consistent with other programs that have requirements (i.e., eligibility requirements, inspection requirements).
- Frequently rotate the order on which installers appear on any list of eligible installers, as customers frequently contact the first establishments listed.

Loan Program Research

- Research Into Action did an evaluation and a logic model of a loan program and a comparative analysis of loan programs throughout the country. These are publicly available documents if the City wishes to consult them.